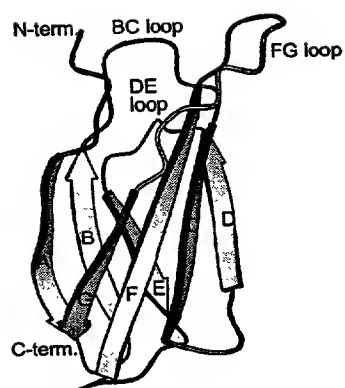
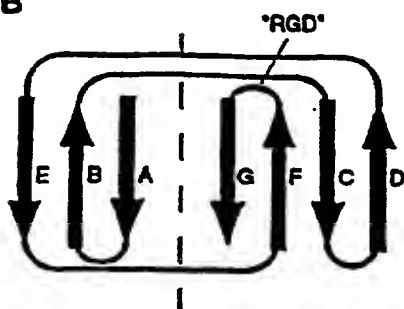


A



B



FIGURES 1A-B

NdeI

CATATGCAGGTTTCTGATGTTCCGCGTGACCTGGAAGTTGTTGCTGCGACCCCGACTAGC
MetGlnValSerAspValProArgAspLeuGluValValAlaAlaThrProThrSer
-2 -1 1 10

BclI PvuII

PstI

BsiWI

CTGCTGATCAGCTGGGATGCTCCTGCAGTTACCGTGCGTTATTACCGTATCAGTACGGT
LeuLeuIleSerTrpAspAlaProAlaValThrValArgTyrTyrArgIleThrTyrGly
20 30

EcoRI

GAAACCGGTGGTAACTCCCCGGTTCAGGAATTCACCTGTACCTGGTTCCAAGTCTACTGCT
GluThrGlyGlyAsnSerProValGlnGluPheThrValProGlySerLysSerThrAla
40 50

SalI

Bst1107I

ACCATCAGCGGCCTGAAACCGGGTGTGCGACTATACCATCACTGTATACGCTGTTACTGGC
ThrIleSerGlyLeuLysProGlyValAspTyrThrIleThrValTyrAlaValThrGly
60 70

SacI

XhoI

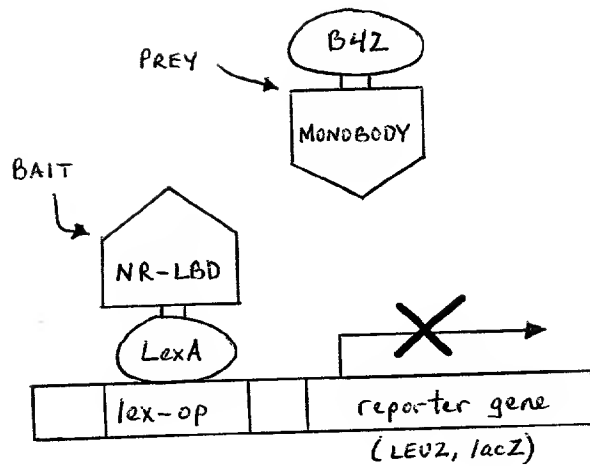
CGTGGTGACAGCCCAGCGAGCTCCAAGCCAATCTCGATTAACTACCGTACCTAGTAACTC
ArgGlyAspSerProAlaSerSerLysProIleSerIleAsnTyrArgThr
80 90

BamHI

GAGGATCC

FIGURE 2

NO INTERACTION

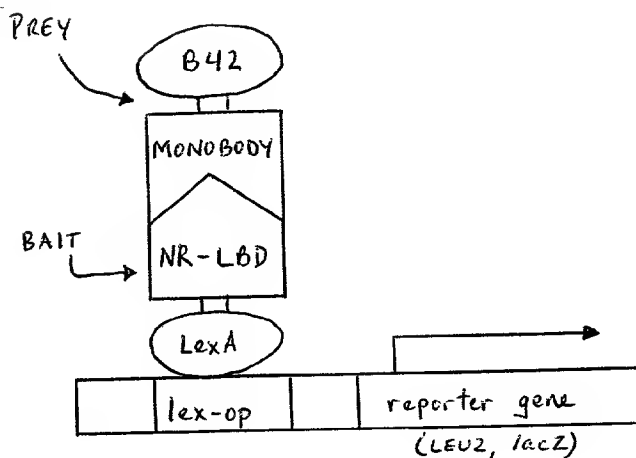


PHENOTYPE

- NO GROWTH IN -LEU MEDIA
- NO β -GALACTOSIDASE ACTIVITY

FIGURE 4A

POSITIVE INTERACTION



PHENOTYPE

- GROWTH IN -LEU/+GALACTOSE MEDIA
- β -GALACTOSIDASE ACTIVITY
- NO GROWTH IN -LEU/-GALACTOSE MEDIA

FIGURE 4B

[illegible]

GAAGTTGTTGCTGCGACCCCGACTAGCCTGCTGATCAGCTGGGATGCTCC**TNNKNNKNNK**
GluValValAlaAlaThrProThrSerLeuLeuIleSerTrpAspAlaProXaaXaaXaa

NNKNNKTATTACCGTATCACGTACGGTGAAACCGGTGGTAACTCCCCGGTTCAGGAATTC
XaaXaaTyrTyrArgIleThrTyrGlyGluThrGlyGlyAsnSerProValGlnGluPhe

ACTGTACCTGGTTC AAGTCTACTGCTACCATCAGCGGCCTGAAACCGGGTGTCTGACTAT
ThrValProGlySerLysSerThrAlaThrIleSerGlyLeuLysProGlyValAspTyr

KpnI

TCGATTA⁺ACTACCGTACCA⁺GTGGTACCGGTGGTTC⁺CCCTCCAAAAAAGAAGAGAAAGGTA
SerIleAsnTyrArgThrSerGlyThrGlyGlySerProProLysLysLysArgLysVal

GCTGGTATCAATAAAGATATCGAGGAGTGCAATGCCATCATTGAGCAGTTTATCGACTAC
AlaGlyIleAsnLysAspIleGluGluCysAsnAlaIleIleGluGlnPheIleAspTyr

CTGCGCACCCGGACAGGAGATGCCGATGGAAATGGCGGATCAGGCGATTAACTGGTGCCG
LeuArgThrGlyGlnGluMetProMetGluMetAlaAspGlnAlaIleAsnValValPro

GGCATGACGCCGAAACCATTCCTTCACGCCGGGCGCGCGATCCAGCCTGACTGGCTGAAA
GlyMetThrProLysThrIleLeuHisAlaGlyProProIleGlnProAspTrpLeuLys

TCGAATGGTTTTTCATGAAATTGAAGCGGATGTTAACGATACCAGCCTCTTGCTGAGTGGG
SerAsnGlyPheHisGluIleGluAlaAspValAsnAspThrSerLeuLeuLeuSerGly

XhoI SphI
GATTAAGTCGAGGCATGC
Asp●●●

FIGURE 5

ATGGGTAAGCCTATCCCTAACCCCTCTCCTCGGTCTCGATTCTACACAAGCTATGGGTGCT
MetGlyLysProIleProAsnProLeuLeuGlyLeuAspSerThrGlnAlaMetGlyAla

CCTCCAAAAAAGAAGAGAAAGGTAGCTGGTATCAATAAAGATATCGAGGAGTGCAATGCC
ProProLysLysLysArgLysValAlaGlyIleAsnLysAspIleGluGluCysAsnAla

ATCATTGAGCAGTTTATCGACTACCTGCGCACCCGACAGGAGATGCCGATGGAAATGGCG
IleIleGluGlnPheIleAspTyrLeuArgThrGlyGlnGluMetProMetGluMetAla

GATCAGGCGATTACGTGGTGCCGGGCATGACGCCGAAAACCATTCTTCACGCCGGGCCG
AspGlnAlaIleAsnValValProGlyMetThrProLysThrIleLeuHisAlaGlyPro

CCGATCCAGCCTGACTGGCTGAAATCGAATGGTTTTTCATGAAATTGAAGCGGATGTTAAC
ProIleGlnProAspTrpLeuLysSerAsnGlyPheHisGluIleGluAlaAspValAsn

KpnI

HindIII

SacI

GATACCAGCCTCTTGCTGAGTGGAGATGCCTCCAAGCTTGGTACCGAGCTCGGATCTATG
AspThrSerLeuLeuLeuSerGlyAspAlaSerLysLeuGlyThrGluLeuGlySerMet

CAGGTTTCTGATGTTCCGACCGACCTGGAAGTTGTTGCTGCGACCCCGNNSNNSNNSNNS
GlnValSerAspValProThrAspLeuGluValValAlaAlaThrProXaaXaaXaaXaa

PvuII

PstI

NNSNNSNNSACTAGCCTGCTGATCAGCTGGGATGCTCCTGCAGTTACCGTGCGTTATTAC
XaaXaaXaaThrSerLeuLeuIleSerTrpAspAlaProAlaValThrValArgTyrTyr

EcoRI

CGTATCACGTACGGTGAAACCGGTGGTAACTCCCCGGTTTCAGGAATTCAGTGTACCTGGT
ArgIleThrTyrGlyGluThrGlyGlyAsnSerProValGlnGluPheThrValProGly

SalI

TCCAAGTCTACTGCTACCATCAGCGGCCTGAAACCGGGTGTCGACTATACCATCACTGTA
SerLysSerThrAlaThrIleSerGlyLeuLysProGlyValAspTyrThrIleThrVal

SacI

TACGCTGTTACTGGCCGTGGTGACAGCCCAGCGAGCTCCAAGCCAATCTCGATTAACTAC
TyrAlaValThrGlyArgGlyAspSerProAlaSerSerLysProIleSerIleAsnTyr

XhoI SphI

CGTACCTAGTAACTCGAGGCATGC

ArgThr•••••

FIGURE 6

ATGGGTAAGCCTATCCCTAACCCCTCTCCTCGGTCTCGATTCTACACAAGCTATGGGTGCT
MetGlyLysProIleProAsnProLeuLeuGlyLeuAspSerThrGlnAlaMetGlyAla

CCTCCAAAAAGAAGAGAAAGGTAGCTGGTATCAATAAAGATATCGAGGAGTGCAATGCC
ProProLysLysLysArgLysValAlaGlyIleAsnLysAspIleGluGluCysAsnAla

ATCATTGAGCAGTTTATCGACTACCTGCGCACCGGACAGGAGATGCCGATGGAAATGGCG
IleIleGluGlnPheIleAspTyrLeuArgThrGlyGlnGluMetProMetGluMetAla

GATCAGGCGATTAACTGGTGCCGGGCATGACGCCGAAAACCATTCTTCACGCCGGGCCG
AspGlnAlaIleAsnValValProGlyMetThrProLysThrIleLeuHisAlaGlyPro

CCGATCCAGCCTGACTGGCTGAAATCGAATGGTTTTTCATGAAATTGAAGCGGATGTTAAC
ProIleGlnProAspTrpLeuLysSerAsnGlyPheHisGluIleGluAlaAspValAsn

KpnI

HindIII SacI

GATACCAGCCTCTTGCTGAGTGGAGATGCCTCCAAGCTTGGTACCGAGCTCGGATCTATG
AspThrSerLeuLeuLeuSerGlyAspAlaSerLysLeuGlyThrGluLeuGlySerMet

CAGGTTTCTGATGTTCCGACCGACCTGGAAGTTGTTGCTGCGACCCGACTAGCCTGCTG
GlnValSerAspValProThrAspLeuGluValValAlaAlaThrProThrSerLeuLeu

PvuII

ATCAGCTGGGATGCTCCTNNKNNKNNKNNKNNKTATTACCGTATCACGTACGGTGAAACC
IleSerTrpAspAlaProXaaXaaXaaXaaXaaTyrTyrArgIleThrTyrGlyGluThr

ECOR I

GGTGGTAACTCCCCGGTTCAGGAATTCAGTGTACCTGGTTCCAAGTCTACTGCTACCATC
GlyGlyAsnSerProValGlnGluPheThrValProGlySerLysSerThrAlaThrIle

SalI

AGCGGCCTGAAACCGGGTGTGCGACTATACCATCACTGTATACGCTGTTACTGGCNNKNNK
SerGlyLeuLysProGlyValAspTyrThrIleThrValTyrAlaValThrGlyXaaXaa

XhoI SphI

NNKNNKNNKNNKNNKTCCAAGCCAATCTCGATTAACTACCGTACCTAGTAACCTCGAGGCA
XaaXaaXaaXaaXaaSerLysProIleSerIleAsnTyrArgThr.....

TGCATCTAGAGGGCCGCATCATGTAATTAGTTATGTCACGCTTA

FIGURE 7

[The page contains faint, illegible markings or bleed-through from the reverse side.]

[The page contains several handwritten mathematical notes and equations, mostly illegible due to extreme blurriness.]

[illegible]

[The page contains faint, illegible markings or bleed-through from the reverse side.]

[The page contains faint, illegible markings or bleed-through from the reverse side.]

[The page contains faint, illegible markings or bleed-through from the reverse side.]

[illegible][illegible][illegible][illegible][illegible]

[The page contains several handwritten mathematical derivations or calculations, mostly illegible due to extreme blurriness.]

[illegible][illegible]

[The page contains several handwritten mathematical notes and equations, mostly illegible due to extreme blurriness.]

[illegible][illegible][illegible][illegible][illegible]

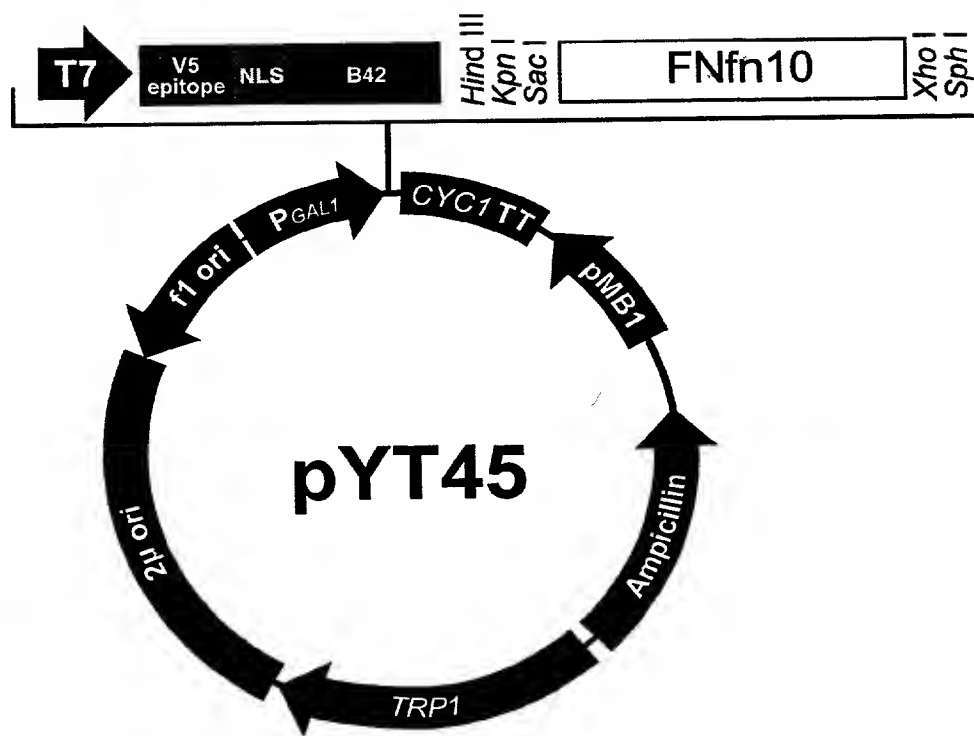


FIGURE 9

ATGGGTAAGCCTATCCCTAACCTCTCCTCGGTCTCGATTCTACACAAGCTATGGGTGCT
MetGlyLysProIleProAsnProLeuLeuGlyLeuAspSerThrGlnAlaMetGlyAla

CCTCCAAAAAAGAAGAGAAAGGTAGCTGGTATCAATAAAGATATCGAGGAGTGCAATGCC
ProProLysLysLysArgLysValAlaGlyIleAsnLysAspIleGluGluCysAsnAla

ATCATTGAGCAGTTTATCGACTACCTGCGCACCGGACAGGAGATGCCGATGGAAATGGCG
IleIleGluGlnPheIleAspTyrLeuArgThrGlyGlnGluMetProMetGluMetAla

GATCAGGCGATTAACGTGGTGCCGGGCATGACGCCGAAAACCATTCTTCACGCCGGGCCG
AspGlnAlaIleAsnValValProGlyMetThrProLysThrIleLeuHisAlaGlyPro

CCGATCCAGCCTGACTGGCTGAAATCGAATGGTTTTTCATGAAATTGAAGCGGATGTTAAC
ProIleGlnProAspTrpLeuLysSerAsnGlyPheHisGluIleGluAlaAspValAsn

HindIII/KpnI/SacI

GATACCAGCCTCTTGCTGAGTGGAGATGCCTCCAAGCTTGGTACCGAGCTCGGATCTATG
AspThrSerLeuLeuLeuSerGlyAspAlaSerLysLeuGlyThrGluLeuGlySerMet

CAGGTTTCTGATGTTCCGACCGACCTGGAAGTTGTTGCTGCGACCCCGACTAGCCTGCTG
GlnValSerAspValProThrAspLeuGluValValAlaAlaThrProThrSerLeuLeu

PvuII

PstI

ATCAGCTGGGATGCTCCTGCAGTTACCGTGCCTTATTACCGTATCACGTACGGTGAAACC
IleSerTrpAspAlaProAlaValThrValArgTyrTyrArgIleThrTyrGlyGluThr

EcoRI

GGTGGTAACTCCCCGGTTCAGGAATTCACCTGTACCTGGTTCCAAGTCTACTGCTACCATC
GlyGlyAsnSerProValGlnGluPheThrValProGlySerLysSerThrAlaThrIle

SalI

AGCGGCCTGAAACCGGTGTCTGACTATACCATCACTGTATACGCTGTTACTGGCCGTGGT
SerGlyLeuLysProGlyValAspTyrThrIleThrValTyrAlaValThrGlyArgGly

SacI

XhoI SphI

GACAGCCCAGCGAGCTCCAAGCCAATCTCGATTAACTACCGTACCTAGTAACTCGAGGCA
AspSerProAlaSerSerLysProIleSerIleAsnTyrArgThr.....

TGC

FIGURE 10

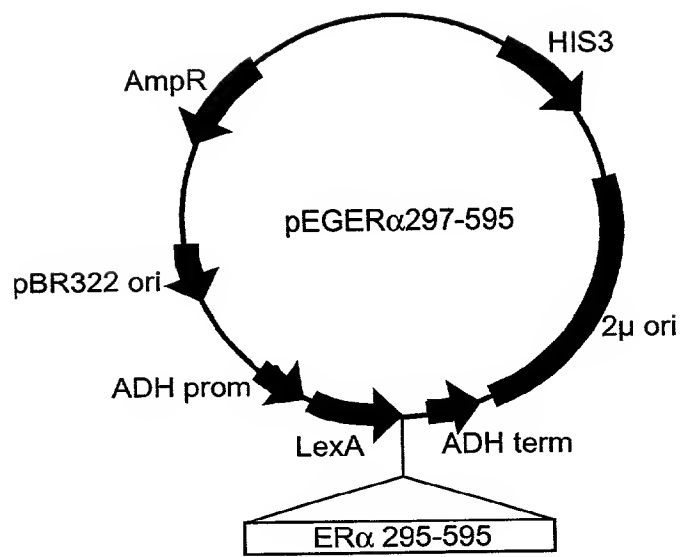


FIGURE 11

ATGAAAGCGTTAACGGCCAGGCAACAAGAGGTGTTTGATCTCATCCGTGATCACATCAGC
MetLysAlaLeuThrAlaArgGlnGlnGluValPheAspLeuIleArgAspHisIleSer

CAGACAGGTATGCCGCCGACGCGTGCAGAAATCGCGCAGCGTTTGGGGTTCCGTTCCTCCA
GlnThrGlyMetProProThrArgAlaGluIleAlaGlnArgLeuGlyPheArgSerPro

AACGCGGCTGAAGAACATCTGAAGGCGCTGGCAGCAAAGGCGTTATTGAAATTGTTTCC
AsnAlaAlaGluGluHisLeuLysAlaLeuAlaArgLysGlyValIleGluIleValSer

GGCGCATCACGCGGGATTTCGTCTGTTGCAGGAAGAGGAAGAAGGGTTGCCGCTGGTAGGT
GlyAlaSerArgGlyIleArgLeuLeuGlnGluGluGluGluGlyLeuProLeuValGly

cgtgtggctgccggtgaaccacttctggcgcaacagcatattgaaggtcattatcaggtc
ArgValAlaAlaGlyGluProLeuLeuAlaGlnGlnHisIleGluGlyHisTyrGlnVal

GATCCTTCCTTATTCAAGCCGAATGCTGATTTCTGCTGCGCGTCAGCGGGATGTCGATG
AspProSerLeuPheLysProAsnAlaAspPheLeuLeuArgValSerGlyMetSerMet

AAAGATATCGGCATTATGGATGGTGAAGTGGTGGCAGTGCATAAACTCAGGATGTACGT
LysAspIleGlyIleMetAspGlyAspLeuLeuAlaValHisLysThrGlnAspValArg

AACGGTCAGGTCGTTGTGCGCACGTATTGATGACGAAGTTACCGTTAAGCGCCTGAAAAA
AsnGlyGlnValValValAlaArgIleAspAspGluValThrValLysArgLeuLysLys

CAGGGCAATAAAGTCGAAGTGTGTCAGAAAATAGCGAGTTTAAACCAATTGTCGTAGAT
GlnGlyAsnLysValGluLeuLeuProGluAsnSerGluPheLysProIleValValAsp

CTTCGTCAGCAGAGCTTCACCATTGAAGGGCTGGCGGTTGGGGTTATTGCAACGGCGAC
LeuArgGlnGlnSerPheThrIleGluGlyLeuAlaValGlyValIleArgAsnGlyAsp

SacI

EcoRI HindIII

TGGCTGGAATTCAAGCTTGAGCTCGGCGGCAGCGGTATGATCAAACGCTCTAAGAAGAAC
TrpLeuGluPheLysLeuGluLeuGlyGlySerGlyMetIleLysArgSerLysLysAsn

AGCCTGGCCTTGTCCTGACGGCCGACCAGATGGTCAGTGCCTTGTTGGATGCTGAGCCC
SerLeuAlaLeuSerLeuThrAlaAspGlnMetValSerAlaLeuLeuAspAlaGluPro

HindIII

CCCATACTCTATTCCGAGTATGATCCTACCAGACCCTTCAGTGAAGCTTCGATGATGGGC
ProIleLeuTyrSerGluTyrAspProThrArgProPheSerGluAlaSerMetMetGly

FIGURE 12A

TTACTGACCAACCTGGCAGACAGGGAGCTGGTTCACATGATCAACTGGGCGAAGAGGGTG
LeuLeuThrAsnLeuAlaAspArgGluLeuValHisMetIleAsnTrpAlaLysArgVal

XbaI

CCAGGCTTTGTGGATTTGACCCTCCATGATCAGGTCCACCTTCTAGAATGTGCCTGGCTA
ProGlyPheValAspLeuThrLeuHisAspGlnValHisLeuLeuGluCysAlaTrpLeu

GAGATCCTGATGATTGGTCTCGTCTGGCGCTCCATGGAGCACCCAGTGAAGCTACTGTTT
GluIleLeuMetIleGlyLeuValTrpArgSerMetGluHisProValLysLeuLeuPhe

GCTCCTAACTTGCTCTTGGACAGGAACCAGGGAAAATGTGTAGAGGGCATGGTGGAGATC
AlaProAsnLeuLeuLeuAspArgAsnGlnGlyLysCysValGluGlyMetValGluIle

PstI

TTCGACATGCTGCTGGCTACATCATCTCGGTTCCGCATGATGAATCTGCAGGGAGAGGAG
PheAspMetLeuLeuAlaThrSerSerArgPheArgMetMetAsnLeuGlnGlyGluGlu

TTTGTGTGCCTCAAATCTATTATTTTGCTTAATTCTGGAGTGTACACATTTCTGTCCAGC
PheValCysLeuLysSerIleIleLeuLeuAsnSerGlyValTyrThrPheLeuSerSer

ACCCTGAAGTCTCTGGAAGAGAAGGACCATATCCACCGAGTCCTGGACAAGATCACAGAC
ThrLeuLysSerLeuGluGluLysAspHisIleHisArgValLeuAspLysIleThrAsp

PstI

ACTTTGATCCACCTGATGGCCAAGGCAGGCCTGACCCTGCAGCAGCAGCACCAGCGGCTG
ThrLeuIleHisLeuMetAlaLysAlaGlyLeuThrLeuGlnGlnGlnHisGlnArgLeu

GCCCAGCTCCTCCTCATCCTCTCCACATCAGGCACATGAGTAACAAAGGCATGGAGCAT
AlaGlnLeuLeuLeuIleLeuSerHisIleArgHisMetSerAsnLysGlyMetGluHis

CTGTACAGCATGAAGTGCAAGAACGTGGTGCCCCTCTATGACCTGCTGCTGGAGATGCTG
LeuTyrSerMetLysCysLysAsnValValProLeuTyrAspLeuLeuLeuGluMetLeu

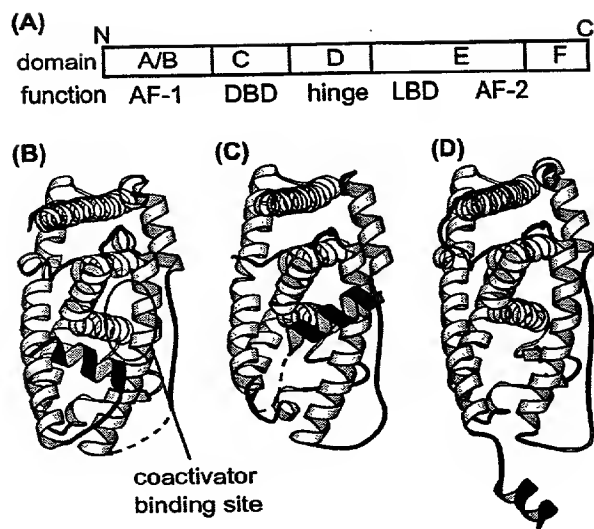
GACGCCCACCGCCTACATGCGCCCACTAGCCGTGGAGGGGCATCCGTGGAGGAGACGGAC
AspAlaHisArgLeuHisAlaProThrSerArgGlyGlyAlaSerValGluGluThrAsp

CAAAGCCACTTGGCCACTGCGGGCTCTACTTCATCGCATTCCTTGCAAAAGTATTACATC
GlnSerHisLeuAlaThrAlaGlySerThrSerSerHisSerLeuGlnLysTyrTyrIle

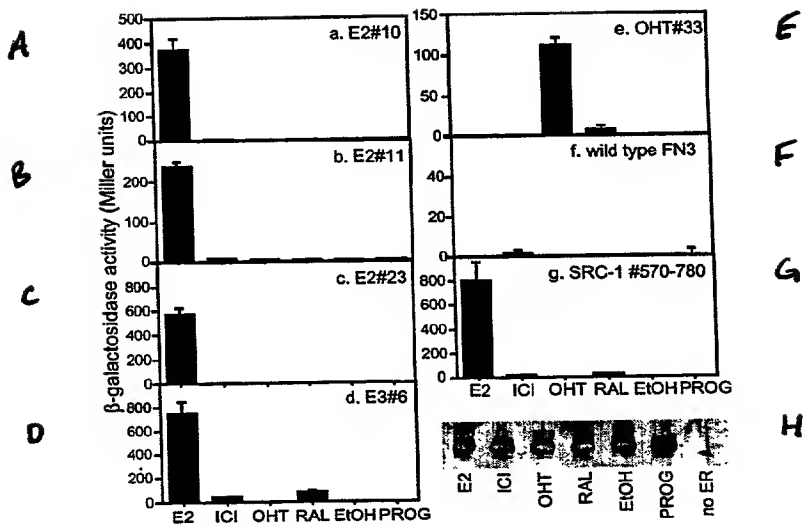
XhoI

ACGGGGGAGGCAGAGGGTTTCCCTGCCACAGTCTGAGctcgag
ThrGlyGluAlaGluGlyPheProAlaThrVal•••

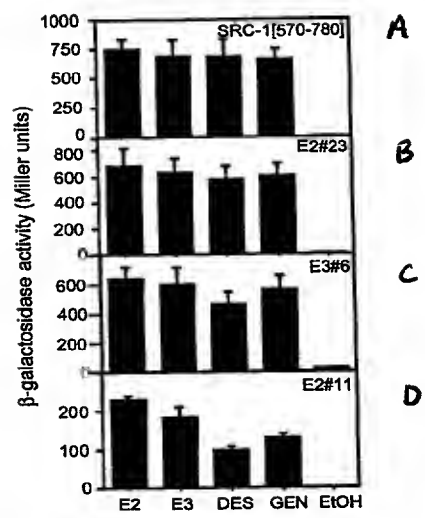
FIGURE 12B



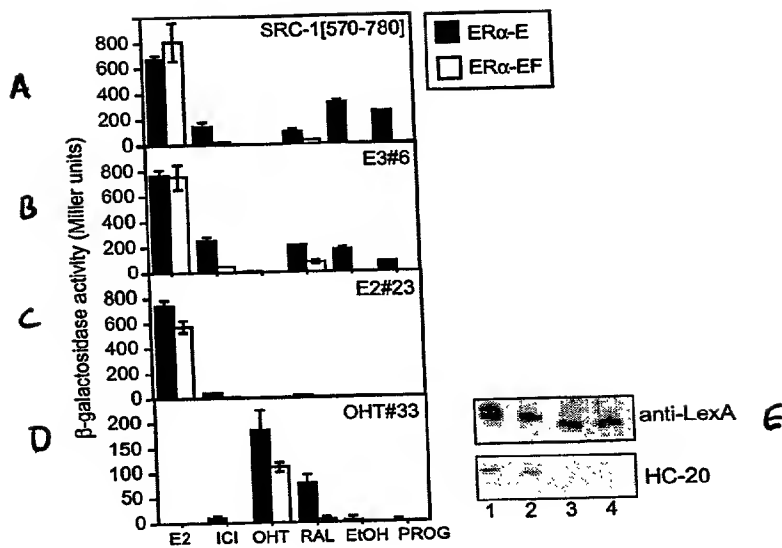
FIGURES 13A-D



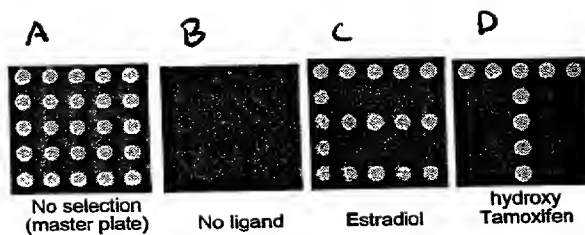
FIGURES 14A-H



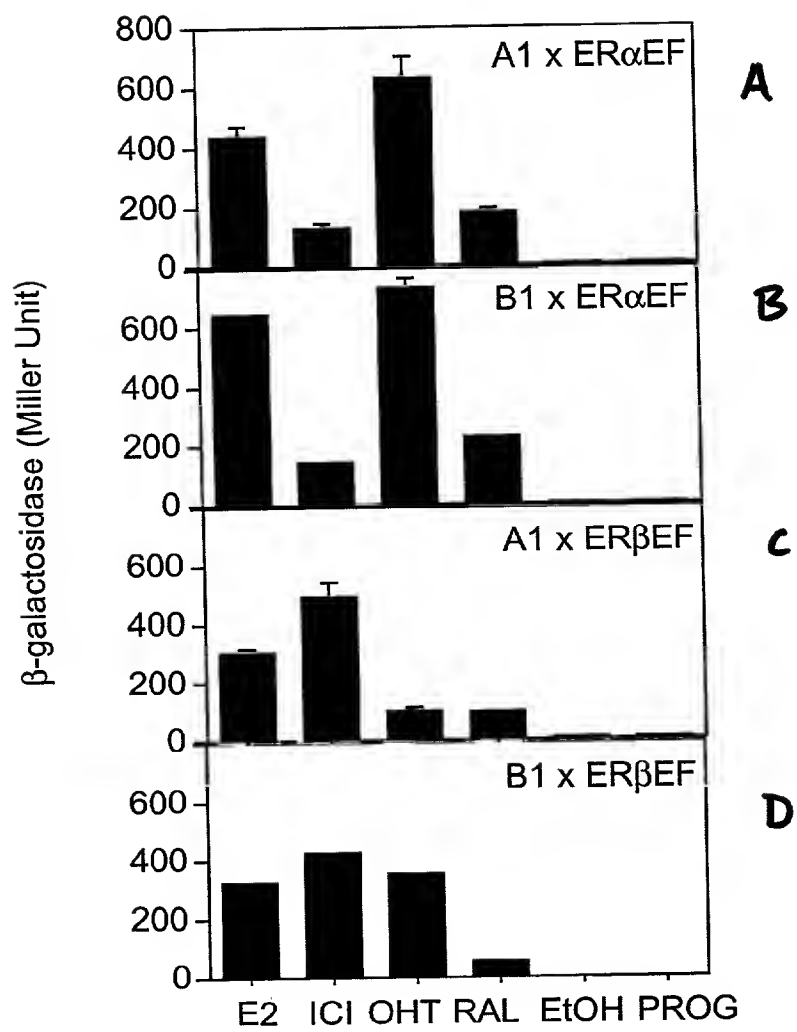
FIGURES 15A-D



FIGURES 16A-E



FIGURES 17A-D



FIGURES 18A-D